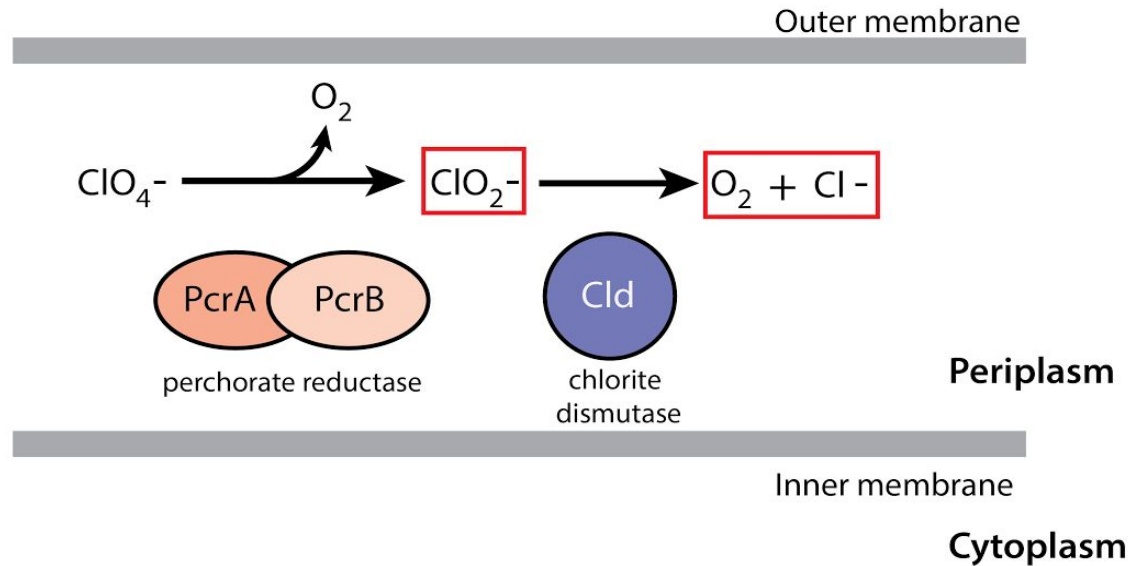
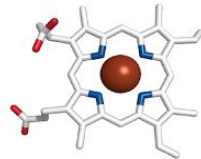


Soil bacteria can degrade perchlorate to oxygen



- 70 species of soil bacteria can degrade ClO_4^- to O_2

- Pcr and Cld both use heme as a catalytic cofactor



- Cld, PcrA and PcrB all have N-terminal signal peptides (SP) that transport them to the periplasm.



- The PcrA and B genes have been characterized from several organisms but have not been functionally expressed [Bender et al., (2005) J. Bacter]
- The Cld gene has been characterized from several organisms [Bender et al. (2005) J. Bacter; Maixner et al. (2008) Environ. Microbiol; Thorell et al. (2003) Biochim. Biophys. Acta] and functionally expressed from two {Maixner, Thorell}.